REMARKS

A. Introduction

Claims 1-8 were pending and under consideration in the application.

In the Final Office Action of July 20, 2009 claims 1 and 8 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Claims 1, 6, and 8 were rejected under 35 U.S.C. §102(b), as being anticipated by Atkinson, et al., US Pub 2002/0073358 A1 (hereinafter, "*Atkinson*").

Claim 7 was rejected under 35 U.S.C. §103(a), as being unpatentable over *Atkinson* in view of Aasheim, et al., U.S. 7,178,061, (hereinafter, "*Aasheim*").

B. Rejections under 35 U.S.C. 112

Claims 1 and 8 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Final Office Action asserted that a feature recited in claim 1, "said boot program instructions comprising a plurality of pages of data, each said page being stored in parallel in at least two data blocks," and a feature recited in claim 8, "said each page being stored in parallel in at least a first respective data block and a second respective data block," are not disclosed in the specification.

The rejection is respectfully traversed.

The "burden of showing that the claimed invention is not described in the specification rests on the PTO in the first instance, and it is up to the PTO to give reasons why a description not in ipsis verbis is insufficient. In re Wertheim, 541 F.2d 257, 265, 191 USPQ 90, 98 (CCPA 1976). Here, the Final Office Action has provided no reasons why the disclosure in the specification is insufficient. As a result the Final Office Action failed to establish a prima facie case of non-compliance with 35 U.S.C. §112, first

paragraph.

There is no requirement that terms in a claim be used in haec verba to satisfy the written description requirement of the first paragraph of 35 U.S.C. 112. Eiselstein v. Frank, 52 F.3d 1035, 1038, 34 USPQ2d 1467, 1470 (Fed. Cir. 1995). Applicants respectfully submit that the disclosure, at least, of Figure 3, and paragraph 0040 satisfies the 35 U.S.C. §112, first paragraph, written description requirement. For example, paragraph 0040, referring to Fig. 3 states "a same boot program is stored in the leading four blocks" of a flash memory. Fig. 3 illustrates the parallel storage of multiple data blocks, where a single block may consist of multiple pages (e.g., 64 pages, as illustrated in Fig. 3).

Accordingly, withdrawal of the §112, first paragraph, rejection is respectfully requested.

C. Rejections under 35 U.S.C. 102(b)

Claims 1-6, and 8 were rejected under 35 U.S.C. §102(b), as being anticipated by *Atkinson*.

Atkinson discloses techniques whereby a computer system supports suspend operations to save power. The suspend operation maintains power to the system memory to enable a quick recovery from the suspend mode. To insure the accuracy of the data in system memory, a copy of the data is backed up to non-volatile memory, such as a hard disk drive, prior to entering the suspend mode. In addition, a signature value representing blocks or pages of memory also is saved with the data. When normal operation resumes, data in system memory is validated by calculating a new signature for each data block or page, and comparing it with the save signature values. If the signatures match, the data is assumed to be valid. If the values do not match, a restore operation proceeds to load the back up copy to that block of system memory. The error checking and restoration operations may be used during normal system operations to insure the integrity of data in the system memory or other volatile memory components. *Atkinson*, abstract.

Atkinson does not relate to boot program instructions, nor to storing boot program instructions in parallel in blocks of data-rewritable nonvolatile memory as recited in the instant claims as previously presented. Rather, as summarized in the preceding paragraph, and described in more detail in *Atkinson*, Fig. 3 and paragraphs 0043-0045, *Atkinson* proposes that a computer system, upon being requested to enter a low-power "suspend to RAM" state, writes a copy of the content of system memory (stored in RAM) to a system hard disk, the content being divided into a number of pages, each page having a calculated signature (such as a checksum value or a cyclical redundancy check value) stored in DRAM, the hard disk, or static RAM. Upon start of a "resume" operation, a read of system memory is performed and the calculated signature of each page is compared to the stored signature for that page. Only when a signature does not match, is a corresponding page of memory in RAM replaced with a backup page stored on the hard disk. *Atkinson*, Fig. 3 and paragraphs 0043-0045.

The Final Office Action (page 2) asserted that *Atkinson* discloses, in paragraphs 0043-0045, "a semiconductor device and a data-rewritable nonvolatile memory, said data rewritable nonvolatile memory having a plurality of data blocks wherein boot program instructions are stored in parallel said boot program instructions comprising a plurality of pages of data, each said page being stored in parallel in at least two data blocks, said semiconductor device comprising a central processing unit (CPU) and a read control circuit (RCC), wherein: the CPU is configured, in part, to specify to the RCC a read position for reading out each page of the boot program instructions stored in the data rewritable nonvolatile memory at the starting time, said each page stored in parallel in at least a first respective data block and a second respective data block; and the RCC is configured to (a) determine whether the first respective data block is faulty or not according to data read out from the first respective block, (b) output the first data to the CPU if the block is determined as not faulty, and (c) read when the first respective data blocks is determined as faulty, second data from the second respective data block and output said second data to the CPU when said second respective data block is determined as not faulty."

The foregoing assertion is not supported by the actual text of the reference, reproduced below:

> [0043] Referring now to FIG. 3, when the suspend event is initiated in step 300, the system BIOS or operating system initially performs an operation similar to a Hibernation to Disk, except that the system memory contents are not treated as a single contiguous block. Instead, the preferred method is to store the memory contents to the hard drive in several pages, with each page having a direct association with particular memory addresses. Thus, for example, a system with 64 MB of DRAM memory may be divided by the algorithm into 4 pages of memory, each with 16 MB. Other page divisions are possible, and pages of much smaller size may be used, if desired. As an example, a page size consistent with page sizes used by the Intel Pentium processor may be used, which typically are 4 KB. Thus, the page size is completely arbitrary with the system designer, and not a limitation of the present invention. Regardless of the page size, an associated signature of each page is calculated and kept in either non-volatile or volatile system memory.
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> [0044] Referring still to FIG. 3, the system memory preferably is read 32 bits at a time and is stored with a known association onto the hard drive. In this example, the Hibernation file (the file that is backed up to non-volatile memory) contains 4 pages of memory, each 16 MB long. As the algorithm reads the data off the system memory (step 302), it develops a signature (step 304), such as a checksum value or a CRC (Cyclical Redundancy Check) value. A CRC value represents a more unique signature than a simple checksum, but requires more processing power to generate. After the page of memory is stored onto the hard drive (step 306), the signature value calculated by the algorithm is stored in either volatile (such as DRAM) or non-volatile (such as the hard drive or static RAM) memory, as shown in step 308. Each of the subsequent pages is read in similar fashion, and a signature is calculated for each of these sections and stored in memory for each page of system memory, as shown by step 310. At that time, the system enters the Suspend to RAM state, in which the clocks are turned off and power is removed from the peripheral devices (step 312).
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> [0045] When a resume operation occurs (step 314), error checking and memory substitution is performed on a page-by-page basis. Initially, the clocks are started and power is turned on to the peripherals to initiate the resume process (step 316). Next, the algorithm performs a read of the system memory. In accordance with this embodiment, the algorithm reads a page of system memory and calculates the signature for that page (step 318). The algorithm then retrieves the stored signature and compares that

signature to the signature calculated during the resume operation, as shown in step 320. If the signatures match, that page or section of memory is assumed to be valid. If the signatures do not match, the contents of that section of system memory are assumed to be invalid, and thus that page is restored from the hard drive to the system memory (step 322). Once each page of system memory has been validated or substituted with the hard drive backup copy (step 324), the Redundant suspend Algorithm hands the operation of the system back to the user (step 326).

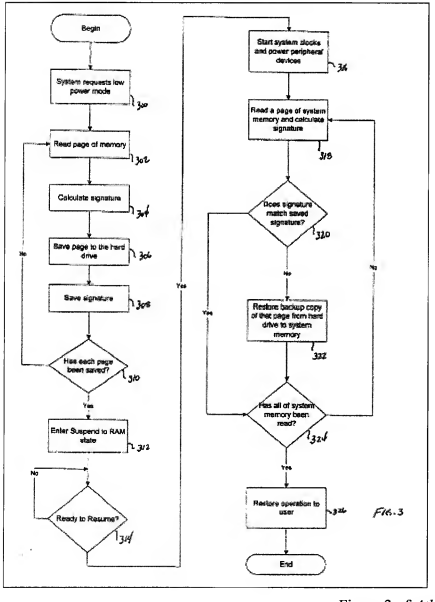

Figure 3 of *Atkinson*

The Final Office Action's assertion that Applicants' independent claims, claims 1 and 8 are anticipated by the foregoing disclosure is flawed, at least because: *Atkinson* fails to teach or suggest (1) storing, in a data-rewritable nonvolatile memory boot program instructions comprising a plurality of pages of data, each said page being stored in parallel in at least two data blocks; (2) determining whether a first respective data block (stored in the data-rewritable nonvolatile memory) is faulty or not according to data read out from the first respective block; and (3) reading, when the first respective data blocks is determined as faulty, second data from a second respective data block (stored in the data-rewritable nonvolatile memory) and outputting said second data to the CPU when said second respective data block is determined as not faulty."

On the contrary, *Atkinson*, at most, discloses that a back up copy of system memory is saved as a number of pages of data in non-volatile memory, prior to entering a suspend mode, each saved page having a calculated signature value also saved in non-volatile memory.

Unless a reference discloses within the four corners of the document not only all of the limitation s claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed, and, thus, cannot anticipate under 35 U.S.C. §102. NetMoneyIn, Inc. v. VeriSign et al., 545 F.3d 1359 (Fed. Cir. 2008). Moreover, "[The] reference must clearly and unequivocally disclose the claimed [invention] or direct those skilled in the art to the [invention] without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference." In re Arkley, 455 F.2d 586, 587 (C.C.P.A. 1972), cited in Net MoneyIN. Because *Atkinson* fails to disclose at least the features of the claims discussed above, claims 1 and 8, and claims depending from claim 1, claims 2-7, are patentable over *Atkinson*.

D. Rejections under 35 U.S.C. 103(a)

Claim 7 was rejected under 35 U.S.C. §103(a), as being unpatentable over

Atkinson in view of *Aasheim*.

Claim 7 depends from claim 1, and is patentable over *Atkinson* for the reasons given in Part C above. *Aasheim* is cited for disclosing a data-rewritable nonvolatile memory being a NAND type flash memory. Whether or not this is true, the disclosure fails to cure the deficiencies noted above.

As a result, Claim 7 is patentable over *Atkinson* in view of *Aasheim*.

E. Conclusion

In view of the foregoing, it is submitted that claims 1-8 are allowable and that the application is in condition for allowance. Early notice to that effect is respectfully requested.

If the Examiner believes that, for any reason, direct contact with Applicants' attorney would help advance the prosecution of this case to finality, the Examiner is invited to telephone the undersigned at the number given below, for purposes of arranging for a telephonic interview. Any communication initiated by this paragraph should be deemed an Applicant-Initiated Interview.

If any further fees are required in connection with the filing of this amendment, please charge the same to our Deposit Account No. 19-3140.

Respectfully submitted,

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